

Bellwork

**A-REI.1.1**

Which property of equality can be used to justify this step?

$$\begin{array}{rcl} 15 - 10x & = & 6x \\ + 10x & + & 10x \\ \hline 15 & = & 16x \end{array}$$

- A. Substitution Property of Equality
- B. Summation Property of Equality
- C. Addition Property of Equality
- D. Subtraction Property of Equality

Factoring Special Cases  $Ax^2 + Bx + C$   
 C has no variable

1)  $25x^2 - 4$

$A = 25, B = 0, C = -4$

$\sqrt{25x^2} = 5x$   
 $\sqrt{4} = 2$

$(5x + 2)(5x - 2)$

(2)  $81v^2 - 121$

$A = 81$

$B = 0$

$C = -121$

$\sqrt{81v^2} = 9v$

$\sqrt{121} = 11$

$(9v + 11)(9v - 11)$

$\sqrt{x^2} = x, \sqrt{y^2} = y, \sqrt{m^2} = m, \sqrt{n^2} = n$

Perfect Squares

$1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144$   
 $1^2, 2^2, 3^2, 4^2, 5^2, 6^2, 7^2, 8^2, 9^2, 10^2, 11^2, 12^2$

$$3) 100m^2 - 140m + 49$$

$$A = 100 \quad B = -140 \quad C = 49$$

$$\sqrt{100m^2} = 10m$$

$$\sqrt{49} = 7$$

$$(10m - 7)(10m - 7)$$

$$\text{or} \\ (10m - 7)^2$$

$$(4) 64n^2 + 80n + 25$$

$$\sqrt{64n^2} = 8n$$

$$\sqrt{25} = 5$$

$$(8n + 5)(8n + 5)$$

$$(8n + 5)^2$$